

AMENDMENTS TO THE CLAIMS

Claims 1-142 (Cancelled)

143. (New) A content encoding apparatus comprising:

first through Mth encoding means for encoding an input signal or an input data file at mutually different compression rates, respectively, (wherein M is an integer equal to or greater than two); and

means for writing data encoded by said first through Mth encoding means into a file as independent tracks, respectively.

144. (New) A content encoding apparatus comprising:

first through Mth encoding means for encoding an input signal or an input data file at mutually different compression rates, respectively (wherein M is an integer equal to or greater than one);

means for generating at least one item of error correction code data from at least one of said first through Mth encode data; and

means for writing the encoded data and the error correction code data into a file as independent tracks, respectively.

145. (New) The content encoding apparatus defined in claim 143, further comprising:

means for Intra-frame encoding the input signal or the input data file; and

means for writing encoded data into a file as an independent track.

146. (New) A content encoding apparatus comprising:

first through Mth encoding means for encoding an input signal or an input data file at mutually different compression rates (wherein M is an integer equal to or greater than two); and

means for writing plural items data encoded by said first through Mth encoding means with a preset time difference or with interleaving, into a file as independent tracks, respectively.

147. (New) A content encoding apparatus comprising:

means for encoding an input signal or an input data file at mutually different compression rates, respectively, (wherein M is an integer equal to or greater than one);

means for generating at least one item of error correction code data from at least one of said first through Mth encoded data; and

means for writing the encoded data and the error correction code data, with a predetermined time difference or with interleaving, into a file as independent tracks, respectively.

148. (New) The content encoding apparatus defined in claim 146, further including:

means for Intra-frame encoding the input signal or the input data file; and

means for writing encoded data, with a predetermined time difference or with interleaving, into a file as an independent track.

149. (New) The content encoding apparatus defined in claim 143, wherein when the M is the integer equal to or greater than two and the encoding is performed, at least one of said second through Mth encoding means performs the encoding using an encoding parameter in encoding processing at said first encoding means.

150. (New) The content encoding apparatus defined in claim 143, wherein when the M is the integer equal to or greater than two, first through Mth encoded data output from said first through Mth encoding means are identical in encoding scheme and frame configuration thereof.

151. (New) The content encoding apparatus defined in claim 143, wherein in case the M is the integer equal to or greater than two, the first through Mth encoded data output from said first through Mth encoding means are obtained by encoding the input signal or data in at least one of a same time period and a same location as an encoding unit and written into a file.

152. (New) The content encoding apparatus defined in claim 143, wherein in case the M is the integer equal to or greater than two, the compression rates for the encoded data of the second through Mth encoding means are equal to or higher than a compression rate for the encoded data of said first encoding means.

153. (New) The content encoding apparatus defined in claim 144, wherein when plural items of the error correction code data are generated from the encoded data in said content encoding apparatus, each of the error correction code data is at least one of:

(a) the error correction code data obtained by different error correction encoding schemes; and

(b) the error correction code data obtained by the same error correction encoding scheme but by a different setting.

154. (New) A content distribution apparatus comprising:

means for reading at least one item of encoded data from a content file;

first through Nth encoded data transmission means for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than two); and

means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission;

at least a part of the first through Nth encoded data obtained by said first through Nth encoded data transmission means being transmitted.

155. (New) A content distribution apparatus comprising:

means for reading at least one item of encoded data and at least one item of error correction code data from a content file;

first through Nth encoded data transmission means for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than one);

at least one error correction code data transmission means for receiving the read error correction code data and outputting the error correction code data; and

means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission;

at least one of

(a) at least a part of the first through Nth encoded data; and

(b) at least a part of the error correction code data being transmitted.

156. (New) The content distribution method defined in claim 154, further comprising:

means for reading at least one item of Intra-frame encoded data from said content file; and

Intra-frame encoded data transmission means for transmitting at least one Intra-frame encoded data read;

at least a part of the Intra-frame encoded data being transmitted.

157. (New) A content distribution apparatus comprising:

means for reading at least one item of encoded data from a content file;

first through Nth encoded data transmission means for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than two); and

means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission;

at least a part of the data from said first through Nth encoded data transmission means being transmitted with time difference or interleaving.

158. (New) A content distribution apparatus comprising:

means for reading at least one item of encoded data and at least one item of error correction code data from a content file;

first through Nth encoded data transmission means for receiving the read encoded data and outputting first through Nth encoded data (wherein N is an integer equal to or greater than one);

at least one error correction code data transmission means for receiving the read error correction code data and outputting the error correction code data; and

means for multiplexing the data output from at least two of said first through Nth encoded data transmission means, for transmission;

at least one of:

(a) at least a part of the first through Nth encoded data, respectively; and

(b) at least a part of the error correction code data;

being transmitted with time difference or interleaving.

159. (New) The content distribution apparatus defined in claim 157, further comprising:

means for reading at least one item of Intra-frame encoded data from said content file; and

Intra-frame encoded data transmission means for transmitting the at least one read-in Intra-frame encoded;

at least a part of the Intra-frame encoded data being transmitted with a time difference or interleaving.

160. (New) The content distribution apparatus defined in claim 157, wherein the time difference or the interleaving is set according to one of:

a state of a transmission path;

compression rates for encoding;

a distribution rate; and

a predetermined rule.

161. (New) The content distribution apparatus defined in claim 157, further including:

means for notifying setting of the time difference or interleaving to a content receiving apparatus using at least one of call connection processing and a predetermined method.

162. (New) The content distribution method defined in claim 154, including:

means for notifying at least one of:

a type of the encoded data for transmission;

a setting of the encoding;

a number of the encoded data;

a type of error correction encoding;

setting of the error correction encoding;

a number of the error correction code data; and

a number of the Intra-frame encoded data;

to said content receiving apparatus, using the call connection processing.

163. (New) The content distribution apparatus defined in claim 154, wherein in case the N is the integer equal to or greater than two, each transmitting unit of the first through Nth encoded data is an encoded data unit obtained by encoding information on a same location of a same medium or in a same time period.

164. (New) The content distribution apparatus defined in claim 163, including:

means for assigning a same identification number to the same transmitting unit of the first through Nth encoded data, respectively, in case the N is the integer equal to or greater than two.

165. (New) The content distribution apparatus defined in claim 163, including:

means for assigning to the encoded data transmitting unit of at least one of the first through Nth encoded data information allowing identification to which one of the encoded data the encoded data transmitting unit belongs.

166. (New) The content distribution apparatus defined in claim 154, wherein at least one of said first through Nth encoded data transmission means includes means for selecting whether to transmit the at least a part of the data for transmission or not according to at least one of the distribution rate and the state of the transmission path.

167. (New) The content distribution apparatus defined in claim 154, wherein when selecting the part of the data for transmission, at least one of said first through Nth encoded data transmission means includes means for selecting the data according to a property of encoding information or the predetermined rule.

168. (New) The content distribution apparatus defined in claim 154, comprising:

means for encrypting the at least a part of the data, for transmission.

169. (New) The content distribution apparatus defined in claim 168, comprising:

means for controlling at least one of:

presence or absence of the encryption;

a distribution destination of an encryption key;

an encryption scheme; and

an intensity of the encryption, thereby controlling at least one of quality, stability, and confidentiality of contents to be distributed on a content distribution side.

170. (New) The content distribution apparatus defined in claim 154,
comprising:

means for transmitting the data to be output from said first through
Nth encoded data transmission means using different sessions, respectively.

171. (New) The content distribution apparatus defined in claim 154,
comprising:

at least one means for multiplexing at least two outputs of the
output data output from said encoded data transmission means;

the multiplexed data and the data not multiplexed being
transmitted using different sessions, respectively.

172. (New) The content distribution method defined in claim 170, wherein
multicast or broadcast transmission is performed using at least one session for
distribution.

173. (New) The content distribution apparatus defined in claim 170,
comprising:

means for controlling a notification destination of session
information on a session for transmitting the data, thereby controlling quality and
stability of contents to be distributed on a content distribution side.

174. (New) The content distribution apparatus defined in claim 170,
comprising:

means for performing at least one of routing priority control on a transmission path and power control on a wireless transmission path using at least one of sessions for distributing the data.

175. (New) A content receiving apparatus comprising:

means for receiving multiplexed encoded data from at least one session, and identifying individual ones of the encoded data therefrom; and

means for extracting the encoded data received with no transmission error and no dropout from among the received encoded data and reconstructing the encoded data.

176. (New) A content receiving apparatus comprising:

means for receiving encoded data and error correction code data that have been multiplexed, from at least one session and identifying individual ones of the encoded data and the error correction code data therefrom; and

means for extracting the encoded data received with no transmission error and no dropout from among the received data and for restoring the encoded data using the error correction code data when the transmission error or the dropout is present to reconstruct the encoded data.

177. (New) The content receiving apparatus defined in claim 175, further including:

means for receiving the encoded data and the Intra-frame encoded data that have been multiplexed from at least one session and identifying individual ones of the encoded data therefrom.

178. (New) The content receiving apparatus defined in claim 177, wherein means for reconstructing the encoded data selects the Intra-frame encoded data by a predetermined device.

179. (New) The content receiving apparatus defined in claim 175, including:

means for restoring the encoded data using at least one of:

an encryption key obtained by call connection processing when the encoded data is encrypted;

a distributed encryption key; and

a predetermined encryption key.

180. (New) The content receiving apparatus defined in claim 175, further comprising:

means for selecting whether to receive the data by at least one of the encoded data receiving means based on at least one of:

error/loss rate of received data;

available power; and

setting set in advance.

181. (New) The content receiving apparatus defined in claim 175, further including:

a step of selecting whether to receive at least one of the error correction code data when receiving the at least one of the error correction code

data or the error correction code data used in error correction processing, based on at least one of:

- error/loss rate of received data;
- error/loss state of data on a transmission path;
- error correction encoding scheme;
- available power; and
- setting set in advance.

182. (New) The content receiving apparatus defined in claim 175, wherein the means for reconstructing the encoded data determines whether the encoded data is duplicated or not based on an identification number assigned to a transmitting unit of the encoded data.

183. (New) The content receiving apparatus defined in claim 175, wherein the means for reconstructing the encoded data comprises means for determining at least one of a compression rate and a data type of the encoded data using at least one of:

- (e) a predetermined distribution data receiving session;
- (f) predetermined data identification information assigned to the transmitting unit of the data;
- (g) a distribution data receiving session, notified by the call connection processing; and

(h) data identification information assigned to the transmitting unit of the data and notified by the call connection processing.

184. (New) The content receiving apparatus defined in claim 175, wherein a unit of the encoded data transmitted by interleaving the unit or providing a time difference for the unit can be received, and a buffer size determined by at least one of:

(i) a predetermined receive buffer size;

(j) a buffer size notified by the call connection processing;

(k) a buffer size calculated based on a predetermined content distribution rate and information on a time difference or interleave setting; and

(l) a buffer size calculated based on a content distribution rate notified by the call connection processing and the information on the time difference or interleave setting; is secured so that the encoded data can be reconstructed.

185. (New) The content receiving apparatus defined in claim 175, comprising:
means for transmitting a reception status of distributed data to a content distribution apparatus.